LIST OF CONTENTS

NUMBERS 1–3

Th. Zimmermann, P. Bomme, D. Eyheramendy, L. Vernier and **S. Commend**	1	Aspects of an object-oriented finite element environment
M. A. Polak	17	Shear analysis of reinforced concrete shells using degenerate elements
M. Imbimbo and **A. De Luca**	31	F.E. stress analysis of rubber bearings under axial loads
N. K. Oztorun, E. Citipitioglu and **N. Akkas**	41	Three-dimensional finite element analysis of shear wall buildings
J. K. Wilson and **B. H. V. Topping**	57	Parallel adaptive tetrahedral mesh generation by the advancing front technique
U. Kirsch and **F. Moses**	79	An improved reanalysis method for grillage-type structures
M. P. Saka	89	The theorems of structural variation for solid cubic finite elements
S. Benfratello and **G. Muscolino**	101	A perturbation approach for the response of dynamically modified structural systems
G. H. Little	113	The dynamic behaviour of elastic steel columns
J. P. Papangelis, N. S. Trahair and **G. J. Hancock**	125	Elastic flexural–torsional buckling of structures by computer
P. Bhatt and **M. Abdel Kader**	139	Prediction of shear strength of reinforced concrete beams by nonlinear finite element analysis
G. H. Little and **A. G. Kamtekar**	157	The effect of thermal properties and weld efficiency on transient temperatures during welding
A. H. Vermeulen and **G. R. Heppler**	167	Structural analysis of shells by the b-spline field approximation method
G. Moreau and **D. Caillerie**	181	Continuum modeling of lattice structures in large displacement applications to buckling analysis
G. J. Turvey and **M. Salehi**	191	Large deflection analysis of eccentrically stiffened sector plates
Y. M. F. Wahba, M. K. S. Madugula and **G. R. Monforton**	207	Evaluation of non-linear analysis of guyed antenna towers
A. Nadjai and **D. Johnson**	213	Elastic and elasto-plastic analysis of planar coupled shear walls with flexible bases

O. O. R. Famiyesin, T. G. Davies and **A. H. C. Chan**	231	Numerical modelling of cyclic loading on reinforced unbound pavements
W. Bull and **C. H. Woodford**	251	The use of steel edge surrounds to reduce stress and displacement in concrete pavements
A. J. Birch and **E. A. Dickin**	261	The response to uplift loading of pyramid foundations in cohesionless backfill
A. Bayraktar and **A. A. Dumanoğlu**	271	The effect of the asynchronous ground motion on hydrodynamic pressures
A. Mihelič and **B. Štok**	283	Tool design optimization in extrusion processes
M. Y. Rafiq and **D. J. Easterbrook**	295	Towards a more economic and better understanding of the design of structural sections using a different interactive approach to software development

NUMBER 4

Y. L. Xu, D. K. Sun, J. M. Ko and **J. H. Lin**	303	Buffeting analysis of long span bridges: a new algorithm
A. Lorenzana and **J. A. Garrido**	315	A boundary element approach for contact problems involving large displacements
S. H. Lo and **C. K. Lee**	325	Selective regional refinement procedure for adaptive finite element analysis
S. Santosa and **T. Wierzbicki**	343	Crash behavior of box columns filled with aluminum honeycomb or foam
P. Litewka and **J. Rakowski**	369	The exact thick arch finite element
K. Lee and **E. Nikolaidis**	381	Effect of member length on the parameter estimates of joints
J. Jönsson	393	Determination of shear stresses, warping functions and section properties of thin-walled beams using finite elements
C. A. Felippa, K. C. Park and **M. R. Justino Filho**	411	The construction of free–free flexibility matrices as generalized stiffness inverses
C. D. Nha, Y. M. Xie and **G. P. Steven**	419	An evolutionary structural optimization method for sizing problems with discrete design variables

NUMBER 5

Z. Zhao	433	A simple error indicator for adaptive boundary element method
M. Raoof and **I. Kraincanic**	445	Determination of wire recovery length in steel cables and its practical applications

A. Bensalem, A. Sibbald and **C. A. Fairfield** 461 The use of dynamic characteristics for the optimal design of arches

A. Krishnan and **Y. J. Suresh** 473 A simple cubic linear element for static and free vibration analyses of curved beams

B. W. Lee and **O. K. Lim** 491 Application of stochastic finite element method to optimal design of structures

B. J. Ryu, K. Katayama and **Y. Sugiyama** 499 Dynamic stability of Timoshenko columns subjected to subtangential forces

D. Z. Huang, T.-L. Wang and **M. Shahawy** 513 Vibration of horizontally curved box girder bridges due to vehicles

N. I. Ioakimidis 529 Application of computer-generated finite-difference equations to decision and inverse problems in elasticity

R. Ganesan 543 Vibration analysis for stability of singular non-self-adjoint beam-columns using stochastic FEM

NUMBER 6

C. E. Augarde 555 Generation of shape functions for straight beam elements

D. Touati and **G. Cederbaum** 561 Effects of compressibility on the postbuckling behavior of imperfect viscoelastic columns

F. F Mahmoud, S. S. Ali-Eldin, M. M. Hassan and **S. A. Emam** 567 An incremental mathematical programming model for solving multi-phase frictional contact problems

F. Tonon and **A. Bernardini** 583 A random set approach to the optimization of uncertain structures

A. Thavalingam, A. Jennings, J. J. McKeown and **D. Sloan** 601 A computerised method for rigid-plastic yield-line analysis of slabs

E. Sai Baba Reddy, M. O'Reilly and **D. N. Chapman** 613 Modified T–Z model—a software for tension piles

S. Ganapathy and **K. P. Rao** 627 Failure analysis of laminated composite cylindrical/spherical shell panels subjected to low-velocity impact

R. Rolfes, K. Rohwer and **M. Ballerstaedt** 643 Efficient linear transverse normal stress analysis of layered composite plates

U. Wendt and **A. Samuelsson** 653 Adaptive modelling of plates in bending and shear

C. B. York and **F. W. Williams** 665 Aircraft wing panel buckling analysis: efficiency by approximations